

REMARKS

I. Introduction

With the cancellation herein without prejudice of claim 21, claims 14 to 20 and 22 to 28 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

II. Rejection of Claims 14 to 28 Under 35 U.S.C. § 112, Second Paragraph

Regarding the rejection of claims 14 to 28 under 35 U.S.C. § 112, second paragraph, the Examiner will note that claim 14 has been amended herein without prejudice to delete the term “significant” and clarify the claim, thereby obviating the present rejection.

Withdrawal of this rejection is therefore respectfully requested.

III. Rejection of Claims 14 and 16 to 27 Under 35 U.S.C. § 112, First Paragraph

Claims 14 and 16 to 28 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. It is respectfully submitted that the present rejection should be withdrawn for at least the following reasons.

Claim 15 recites that “the *medium* includes an *electrolyte solution*,” not that the electrolyte solution is implemented in a *non-electrochemical process*. On page 7, lines 14 to 17, of the specification, reference is made that the method hereof is not exclusively restricted to an electrochemical process *having an electrolyte as a working medium*. A working medium other than an electrolyte solution may be used in the *electrochemical process*. Thus, the ability to implement the electrochemical process with a medium other than *electrolyte solution* would be understood by one skilled in the art.

In view of the foregoing, it is respectfully submitted that claims 14 and 16 to 28 are sufficiently enabled. Accordingly, withdrawal of this rejection is respectfully requested.

IV. Rejection of Claims 14 to 17 and 24 Under 35 U.S.C. § 102(b)

Claims 14 to 17 and 24 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,415,761 ("Mull"). It is respectfully submitted that Frembgen does not anticipate these claims for at least the following reasons.

Claim 14, as amended, relates to a method for processing at least one workpiece according to an electrochemical processing, including the features of *comparing a current measured one of toward and at an end of processing to a second predefined range that is smaller than a range specified during a test procedure*. Support for this amendment may be found, for example, in previous claim 21, and on page 7, lines 1 to 12, of the Specification.

Mull is directed to a process for electrochemically depositing a structured surface layer on a component, including defining a parameter, effecting an electro-chemical layer deposition, and depositing a surface layer on the component by providing an initial pulse of the electrical parameter and forming a plurality of island formations of deposition material on a surface of the component to be electro-chemically coated, and subsequently providing a follow-up pulse of the electrical parameter and causing a growth of the deposition material on the plurality of islands for causing the structured outer surface topography.

Nowhere, does Mull disclose, or even suggest, *comparing a current measured one of toward and at an end of processing to a second predefined range that is smaller than a range specified during a test procedure*. With respect to (now cancelled) claim 21, the Examiner cited U.S. Patent No. 3,635,802 ("Manning et al.") as allegedly disclosing the feature of *comparing a current measured one of toward and at an end of processing to a second predefined range that is smaller than a range specified during processing*.

Manning et al. is directed to the anodization of a thin-film device in accordance with a selected pattern of anodizing steps, under which each successive step is designed to decrease by a fixed fractional multiple the percentage deviation of the parameter of interest from a desired final value of the parameter, which will bring a parameter of the device, e.g., the resistance of a thin-film resistor, within a very narrow tolerance zone in a minimum time period, yet with a minimal likelihood of overshooting the nominal value of such a degree as to pass out of the tolerance zone. While Manning et al. may disclose successive tolerance ranges and fitting a parameter within each successive range, nowhere, does Manning et al. disclose

*comparing a current measured one of toward and at an end of processing to a second predefined range that is smaller than a range specified **during a test procedure**.*

As such, Mull does not disclose, or even suggest, all of the features recited in claim 14. Therefore, it is respectfully submitted that Mull does not anticipate claim 14.

Claims 15 to 17 and 24 ultimately depend from claim 14 and therefore include all of the features recited in claim 14. As such, it is respectfully submitted that Mull does not anticipate these dependent claims for at least the reasons set forth above in support of the patentability of claim 14.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

V. Rejection of Claims 14 to 16, 18, 19, 24, and 28 Under 35 U.S.C. § 103(a)

Claims 14 to 16, 18, 19, 24, and 28 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of U.S. Patent No. 5,225,053 ("Frembgen") and U.S. Patent No. 5,077,486 ("Marson et al."); or U.S. Patent No. 6,391,184 ("Orolin et al."); or U.S. Patent No. 4,331,524 ("Matthes") and U.S. Patent No. 6,038,155 ("Pelly"). It is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly does not render unpatentable these claims for at least the following reasons.

Frembgen is directed to a method for controlling an electrical current from a direct current source of an electrochemical working machine having a tool and a workpiece, wherein the electrical current is continuously increased to the working gap as a function of the physical parameter measured such that the gap voltage is continuously increased as the spacing of the working gap is increased.

As stated in the previous Response, according to Fremdgen, the ramp-shaped voltage characteristic occur exclusively at the time of a processing. Nowhere, does Frembgen disclose, or even suggest, a point in time prior to which no significant processing takes place. According to Figure 4 of Fremdgen, a sudden application of the working voltage to 12V is to be assumed. In Fremdgen, the focus is on a reduction of the processing time. Thus, one skilled in the art would not increase the voltage via a ramp to a predefined value before the actual processing

occurs, the actual processing occurring upon reaching the predefined value.

In contrast, according to the present claims, the ramp-shaped voltage characteristic is configured such that when value U1 is reached, **actual processing** of the workpiece takes place. Thus, the method also covers a time period **before** the actual processing of the workpiece. The method is based on the knowledge that when the processing voltage is applied suddenly with the switch-on phase, a very high processing current flows, which can cause damage to the electrode, at least over the long term (see page 2, lines 18 to 22, of the specification). As a result, initial current spikes are eliminated, and the switch-on phase for processing the workpiece occurs in a much smoother manner. Accordingly, the ramp guides the entire system in a gentle manner from a non-processing state to a processing or removing state.

Furthermore, as stated above, claim 14, as amended, relates to a method for processing at least one workpiece according to an electrochemical processing, including the features of *comparing a current measured one of toward and at an end of processing to a second predefined range that is smaller than a range specified during a test procedure*.

Nowhere, does Frembgen disclose, or even suggest, *comparing a current measured one of toward and at an end of processing to a second predefined range that is smaller than a range specified during a test procedure*. Neither, Marson et al., nor Orolin et al. nor Matthes and Pelly cure these deficiencies.

As such, the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly does not disclose, or even suggest, all of the features recited in claim 14. Therefore, it is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly does not render unpatentable claim 14.

Claims 15, 16, 18, 19, 24, and 28 ultimately depend from claim 14 and therefore include all of the features recited in claim 14. As such, it is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly does not render unpatentable these dependent claims for at least the reasons set forth above in support of the patentability of claim 14.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

VI. Rejection of Claim 20 Under 35 U.S.C. § 103(a)

Claim 20 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly, in view of U.S. Patent No. 6,551,488 (“Hey et al.”) or U.S. Patent No. 5,004,528 (“England”). It is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly, Hey et al. or England does not render unpatentable this claim for at least the following reasons.

Claim 20 depends from claim 14 and therefore includes all of the features included in claim 14. As more fully set forth above, Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly does not disclose, or even suggest, all of the features included in claim 14. Hey et al. or England are not relied upon for disclosing or suggesting the features of claim 14 not disclosed or suggested by Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly. Indeed, it is respectfully submitted that Hey et al. or England do not disclose, or even suggest, the features included in claim 14 not disclosed or suggested by Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly. As such, it is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly, Hey et al. or England does not render unpatentable claim 20, which depends from claim 14.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

VII. Rejection of Claim 21 Under 35 U.S.C. § 103(a)

Claim 21 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly, in view of U.S. Patent No. 3,635,802 (“Manning et al.”). It is respectfully submitted that the combination of Frembgen and Manning et al. does not render unpatentable this claim for at least the following reasons.

Claim 21 has been cancelled herein without prejudice rendering moot the present rejection with respect with claim 21. In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

VIII. Rejection of Claim 23 Under 35 U.S.C. § 103(a)

Claim 23 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly, in view of U.S. Patent No. 5,503,730 ("Osano et al."). It is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly and Osano et al. does not render unpatentable this claim for at least the following reasons.

Claim 23 depends from claim 14 and therefore includes all of the features included in claim 14. As more fully set forth above, Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly does not disclose, or even suggest, all of the features included in claim 14. Osano et al. is not relied upon for disclosing or suggesting the features of claim 14 not disclosed or suggested by Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly. Indeed, it is respectfully submitted that Osano et al. does not disclose, or even suggest, the features included in claim 14 not disclosed or suggested by Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly. As such, it is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly and Osano et al. does not render unpatentable claim 23, which depends from claim 14.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

IX. Rejection of Claims 22, 25, 26 Under 35 U.S.C. § 103(a)

Claims 22, 25, 26 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly, in view of U.S. Patent No. 6,214,200 ("Altena et al."). It is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly and Altena et al. does not render unpatentable these claims for at least the following reasons.

Claims 22, 25, 26 depend from claim 14 and therefore include all of the features included in claim 14. As more fully set forth above, Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly does not disclose, or even suggest, all of the features included in claim 14. Altena et al. is not relied upon for disclosing or suggesting the features of claim 14 not disclosed or suggested by Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly. Indeed, it is respectfully

submitted that Altena et al. does not disclose, or even suggest, the features included in claim 14 not disclosed or suggested by Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly. As such, it is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly and Altena et al. does not render unpatentable claims 22, 25, 26, which depend from claim 14.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

X. Rejection of Claim 27 Under 35 U.S.C. § 103(a)

Claim 27 was rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly, in view of Altena et al. or U.S. Patent No. 6,440,291 ("Henri et al."). It is respectfully submitted that the combination of Frembgen and Altena et al. or Henri et al. does not render unpatentable this claim for at least the following reasons.

Claim 27 depends from claim 14 and therefore includes all of the features included in claim 14. As more fully set forth above, Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly and Altena et al. does not disclose, or even suggest, all of the features included in claim 14. Henri et al. is not relied upon for disclosing or suggesting the features of claim 14 not disclosed or suggested by Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly and Altena et al. Indeed, it is respectfully submitted that Henri et al. do not disclose, or even suggest, the features included in claim 14 not disclosed or suggested by Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly and Altena et al. As such, it is respectfully submitted that the combination of Frembgen and Marson et al. or Orolin et al. or Matthes and Pelly and Altena et al. or Henri et al. does not render unpatentable claim 27, which depends from claim 14.

In view of all of the foregoing, withdrawal of this rejection is respectfully requested.

XI. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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